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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,932	12/08/2003	Toshimitsu Konuma	0756-7221	9654
31780	7590	04/23/2004	EXAMINER	
ERIC ROBINSON			NGO, HUYEN LE	
PMB 955				
21010 SOUTHBANK ST.			ART UNIT	PAPER NUMBER
POTOMAC FALLS, VA 20165			2871	

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/728,932	KONUMA, TOSHIMITSU	
	Examiner	Art Unit	
	Julie-Huyen L. Ngo	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-16 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/8/03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: ____ . |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed December 8, 2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but some of the information that is not initialed by the Examiner has not been considered.

Priority

Applicant is reminded that in order for a patent issuing on the instant application to obtain the benefit of priority based on priority papers filed in parent Application No. 08/081,705 under 35 U.S.C. 119(a)-(d) or (f), a claim for such foreign priority must be made in this application. In making such claim, applicant may simply identify the application containing the priority papers.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11

F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1-4 and 12-15 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13,14 and 16 of U.S. Patent No. 6693696B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because the spacing between said substrates being less than 3.5 μ m in claim 1 of the instant application is in a range of an interval of the substrates is 5 μ m or less in claim 16 of U.S. Patent No. 6693696B1.

2. Claims 6-9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13,14 and 16 of U.S. Patent No. 6693696B1 and further in view of Bos (US4566758).

Claims 13-14 and 16 of U.S. Patent No. 6693696B1 disclose all limitations in claims 6-9 of the instant application except for a pair of orientation films having antiparallel orientation directions to each other.

Bos teach (abstract) the LVD comprising pair of orientation films having antiparallel orientation directions to each other for fast switching between the cell states because the motion of the liquid crystal material is limited.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a display device as disclosed in claims 13-14 and 16 of U.S. Patent No. 6693696B1 with a pair of orientation films having antiparallel orientation directions to each other for fast switching between the cell states because the motion of the liquid crystal material is limited.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanemoto et al. (US5250214A) in view of Nakagawa et al. (US4983023).

With respect to claims 1-5 and 12-16, Kanemoto et al. teach (Fig. 2) a display device comprising:

- a pair of substrates 11/21;
- a liquid crystal layer 15 provided between said pair of substrates and comprising a nematic liquid crystal having positive dielectric anisotropy (col. 5 lines 52-56);

- a pair of orientation films 13/23 provided over said pair of substrates respectively;
- a first electrode provided over one of said substrates; and a second electrode provided over the other of said substrates (claims 3 and 15).

wherein

- said orientation films have a surface tension of 40 dyne/cm or more (col. 26 lines 61-66);
- each of said orientation films comprises a polyimide (claims 2 and 13).

(Claims 3 and 14)

- It is well known in the art the display device to be a reflective –type display device with the reflection layer on surface of lower substrate for operating in ambient light

However, Kanemoto et al. and conventional art fail to disclose a display device having spacing between said substrates being less than 3.5 μm .

Nakagawa et al. teach (col. 3 lines 55-60) a display device having spacing between said substrates being less than 3.5 μm for obtaining high quality display.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a display device as Kanemoto et al. disclosed with spacing between said substrates being less than 3.5 μm for obtaining high quality display.

Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanemoto et al. (US5250214A) in view of Nakagawa et al. (US4983023) as applied to claims 1-5 and 12-16 above, and in further view of Bos (US4566758).

Kanemoto et al. and Nakagawa et al. Obviously disclose all limitations of claims 6-11 except for pair of orientation films having antiparallel orientation directions to each other.

Bos teach (abstract) the LVD comprising pair of orientation films having antiparallel orientation directions to each other for fast switching between the cell states because the motion of the liquid crystal material is limited.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a display device as Kanemoto et al. disclosed with pair of orientation films having antiparallel orientation directions to each other for fast switching between the cell states because the motion of the liquid crystal material is limited.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Hotta et al. (US 5452114 A) disclose a ferroelectric liquid crystal display device with spacing between the substrates held by silica beads 106 with an average particle size of, e.g., about 1.5 μ m (generally 0.1-3.5 μ m).

Tanimura et al. (US 5958574 A) disclose a polyolefin resin composition and oriented film having the critical surface tension being greater than 40 dyne/cm.

Nito et al. (US 5214523 A) disclose the liquid crystal cells with the antiparallel orientation in a non-energized state coinciding with the rubbing direction, and the striped structure proper to monostability was observed.

Contact Information

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Julie-Huyen L. Ngo whose telephone number is (571) 272-2295. The Examiner can normally be reached on T-Friday.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. Robert H. Kim can be reached at (571) 272-2293.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1562.

April 16, 2004

Julie -Huyen L. Ngo
Primary Examiner
Art Unit 2871